

S/N To be assigned

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Henriksson Serial No.: To be assigned
Filed: CONCURRENT HEREWITH Docket No.: 796.415USW1
Title: TESTING OF RADIO TRANSCEIVER

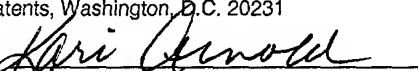
CERTIFICATE UNDER 37 C.F.R. 1.10:

'Express Mail' mailing number: EL887039110US

Date of Deposit: November 13, 2001

The undersigned hereby certifies that this Transmittal Letter and the paper or fee, as described herein, are being deposited with the United States Postal Service 'Express Mail Post Office To Addressee' service under 37 CFR 1.10 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231

By:


Kari Arnold

PRELIMINARY AMENDMENT

Box Patent Application
Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Please enter the following preliminary amendment into the above-referenced application.

ABSTRACT

Please insert the attached abstract into the application as the last page thereof.

CLAIMS

Please cancel claims 1-11 and add new claims 12-22 as follows. A clean copy of the new claims is included below.

12. (NEW) A method for testing the radio transceiver in a system where the transmission signal pass band, limited by the transmission branch filter of a duplex filter, and the reception signal pass band, limited by the reception branch filter, are adjacent so that the frequency response curves of said filters partially overlap at the stop band between the pass bands, wherein the steps of:

arranging a test loop between the transmission branch and the reception branch, wherein the test loop includes a TX coupling, a band pass filter, and a RX coupling, the test loop having essentially less attenuation on the test frequency than the duplex filter and thus a test signal proceeds via the test loop from the transmitter to the receiver,

tuning the transmitter's transmission frequency away from the transmission signal pass band to a test frequency that falls into the stop band of the transmission branch filter frequency response curve and the reception branch filter frequency response curve,

tuning the receiver reception frequency to the test frequency,

transmitting the test signal,

receiving the test signal which has been attenuated while passing through the test loop.

13. (NEW) A method for testing the radio transceiver in a system where the transmission signal pass band, limited by the transmission branch filter of a duplex filter, and the reception signal pass band, limited by the reception branch filter, are adjacent such that the frequency response curves of said filters partially overlap at the stop band between the pass bands, wherein the steps of:

arranging a test loop between the transmission branch and the reception branch, wherein the test loop includes a TX coupling, a switch, and a RX coupling, the test loop having essentially less attenuation on the test frequency than the duplex filter and thus a test signal proceeds via the test loop from the transmitter to the receiver when the switch having been closed by a switch control,

tuning the transmitter's transmission frequency away from the transmission signal pass band to a test frequency that falls into the stop band of the transmission branch filter frequency response curve and the reception branch filter frequency response curve,

tuning the receiver reception frequency to the test frequency,

transmitting the test signal,

receiving the test signal which has been attenuated while passing through the test loop.

14. (NEW) A method for testing a unit comprising several radio transceivers in a system where

the transmission signals are combined by a combiner into a sum signal and transmitted to the duplex filter, and the received sum signal containing various

[illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible]

1978		1979		1980		1981		1982		1983		1984		1985		1986		1987		1988		1989		1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		2036		2037		2038		2039		2040		2041		2042		2043		2044		2045		2046		2047		2048		2049		2050		2051		2052		2053		2054		2055		2056		2057		2058		2059		2060		2061		2062		2063		2064		2065		2066		2067		2068		2069		2070		2071		2072		2073		2074		2075		2076		2077		2078		2079		2080		2081		2082		2083		2084		2085		2086		2087		2088		2089		2090		2091		2092		2093		2094		2095		2096		2097		2098		2099		2100		2101		2102		2103		2104		2105		2106		2107		2108		2109		2110		2111		2112		2113		2114		2115		2116		2117		2118		2119		2120		2121		2122		2123		2124		2125		2126		2127		2128		2129		2130		2131		2132		2133		2134		2135		2136		2137		2138		2139		2140		2141		2142		2143		2144		2145		2146		2147		2148		2149		2150		2151		2152		2153		2154		2155		2156		2157		2158		2159		2160		2161		2162		2163		2164		2165		2166		2167		2168		2169		2170		2171		2172		2173		2174		2175		2176		2177		2178		2179		2180		2181		2182		2183		2184		2185		2186		2187		2188		2189		2190		2191		2192		2193		2194		2195		2196		2197		2198		2199		2200		2201		2202		2203		2204		2205		2206		2207		2208		2209		2210		2211		2212		2213		2214		2215		2216		2217		2218		2219		2220		2221		2222		2223		2224		2225		2226		2227		2228		2229		2230		2231		2232		2233		2234		2235		2236		2237		2238		2239		2240		2241		2242		2243		2244		2245		2246		2247		2248		2249		2250		2251		2252		2253		2254		2255		2256		2257		2258		2259		2260		2261		2262		2263		2264		2265		2266		2267		2268		2269		2270		2271		2272		2273		2274		2275		2276		2277		2278		2279		2280		2281		2282		2283		2284		2285		2286		2287		2288		2289		2290		2291		2292
------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------

[illegible][illegible]

tuning the transmitter's transmission frequency away from the transmission signal pass band to a test frequency that falls into the stop band of the transmission branch filter frequency response curve and the reception branch filter frequency response curve,

tuning the receiver reception frequency to the test frequency,

transmitting the test signal,

receiving the test signal which has been attenuated while passing through the test loop.

16. (NEW) A method in accordance with patent claim 14, wherein that the reception frequency of each receiver is tuned to the test frequency,

transmitting the test signal by one transmitter,

receiving the test signal by each receiver, and if at least one receiver receives the test signal correctly, it is assumed that a receiver receiving the test signal incorrectly is defective.

17. (NEW) A method in accordance with patent claim 14, wherein that

sending the test signal by the transmitters one by one,

receiving the test signal by several receivers,

inferring that the transmitter being tested is defective if at least one receiver has received the test signal sent by any other transmitter correctly and the transmitter being tested has received the test signal sent incorrectly or not at all.

18. (NEW) A method in accordance with patent claim 14, wherein that

sending the test signal by each transmitter one by one,

receiving the test signal by several receivers ,

inferring that the test loop between the transmitters and receivers is defective, if none of the receivers receives a signal sent on the test signal frequency.

19. (NEW) A system for testing the radio transceiver in a system that comprises

a transmission branch consisting of a functionally inter-connected transmitter and duplex filter and a reception branch consisting of a functionally inter-connected receiver and duplex filter, with the duplex filter limiting the transmission signal pass band and the reception signal pass band,

a test control tuning the transmitter and the receiver on the same test frequency as response to control and the transmitter sending the test signal,

wherein that it comprises:

a test filter that is connected between the transmission branch and reception branch and causing an attenuation on the test frequency that is essentially lower than the attenuation caused by the duplex filter, which enables the test signal to proceed

along the test loop from the transmitter to the receiver via a TX coupling, a switch, and a RX coupling, the test filter causing an attenuation on the transmission signal pass band and the reception signal pass band limited by the duplex filter being essentially higher than the attenuation caused by the duplex filter, which enables the transmission signal to proceed from the transmitter to the duplex filter and on to the antenna.

20. (NEW) A system for testing the radio transceiver in a system that comprises

a transmission branch consisting of a functionally inter-connected transmitter and duplex filter and a reception branch consisting of a functionally inter-connected receiver and duplex filter, with the duplex filter limiting the transmission signal pass band and the reception signal pass band,

a test control tuning the transmitter and the receiver on the same test frequency as response to control and the transmitter sending the test signal,

wherein that it comprises:

a test filter that is connected between the transmission branch and reception branch and causing an attenuation on the test frequency that is essentially lower than the attenuation caused by the duplex filter, which enables the test signal to proceed along the test loop from the transmitter to the receiver via a TX coupling, a band pass filter, and a RX coupling when the switch having been closed by a switch control, the test filter causing an attenuation on the transmission signal pass band and the reception signal pass band limited by the duplex filter being essentially higher than the attenuation caused by the duplex filter, which enables the transmission signal to proceed from the transmitter to the duplex filter and on to the antenna.

21. (NEW) A system in accordance with patent claim 19, wherein that the test frequency is outside the range of the transmission signal pass band of the duplex filter.

22. (NEW) A system in accordance with patent claim 19, wherein that the test filter is integrated within the duplex filter, in which case the test loop also includes the cabling between the transmitter and the duplex filter and the cabling between the duplex filter and the receivers.

REMARKS

The above preliminary amendment is made to insert an abstract page into the application and to enter new claims 12-22.

Applicant respectfully requests that this preliminary amendment be entered into the record prior to calculation of the filing fee and prior to examination and consideration of the above-identified application.

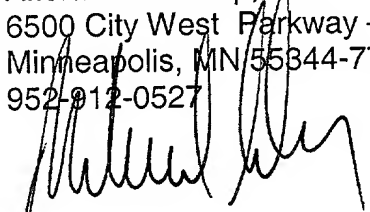
If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's attorney of record, Michael B. Lasky at 952/912-0527.

Respectfully submitted,

Altera Law Group, LLC
6500 City West Parkway – Suite 100
Minneapolis, MN 55344-7701
952-912-0527

Date: November 13, 2001

By:



Michael B. Lasky
Reg. No. 29,555
MBL/blj

100843-1101